

PLANNING HORIZONS · 9.27.17 · ELLEN GREENBERG







UNITED NATIONS

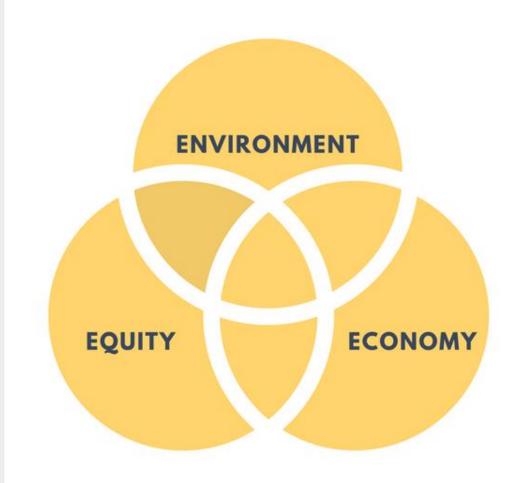


Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

-Brundtland Commission, 1987

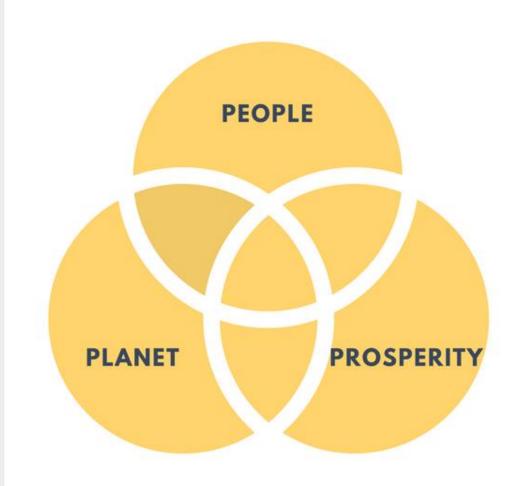
THE 3 Es

Core concepts from the Brundtland report



THE 3 Ps

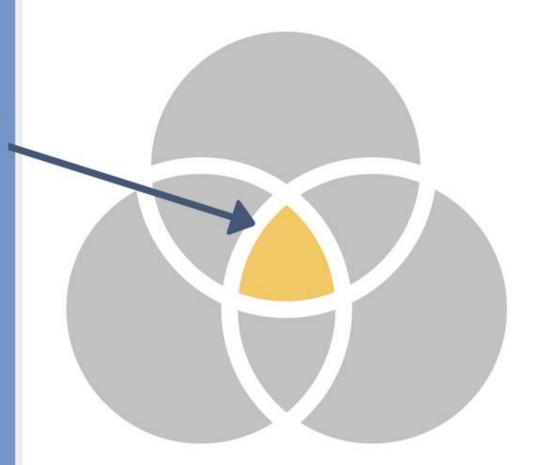
 Caltrans expresses sustainability objectives through the 3 Ps



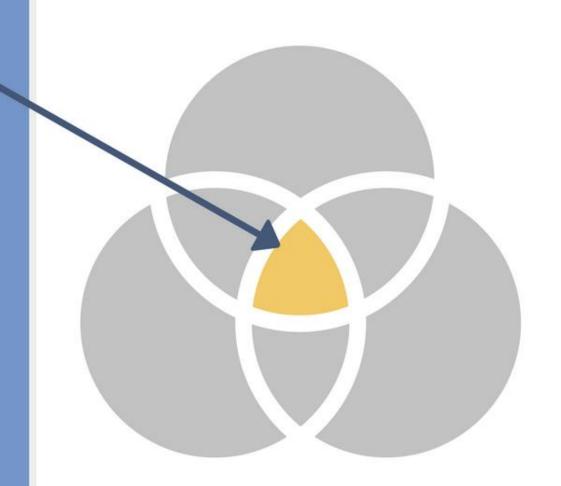
TRIPLE BOTTOM LINE

When we try to pick out anything by itself, we find it hitched to everything else in the Universe.

-John Muir



AN IDEAL, and a WORK IN PROGRESS



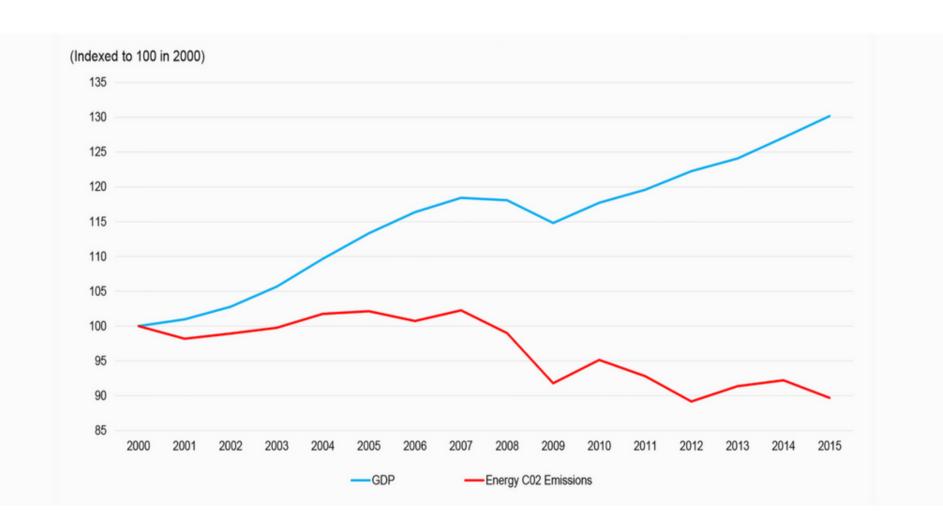
We used to ask:

"How can we grow the economy?"

Now we ask:

"How can we grow the economy in a way that widely distributes benefits and costs, while reducing consumption of natural resources?"

CHANGE IN U.S. GDP AND CO2 EMISSIONS



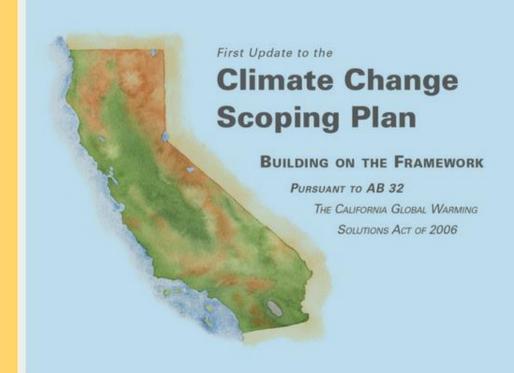
Source: Brookings Institution 2016

CALIFORNIA COMMITMENTS

It's time for courage, it's time for creativity and it's time for boldness to tackle climate change... The risk is real, the cost is huge and growing, and therefore taking a sequence of realistic steps just makes sense, and that's what we're going to do in California.

- Gov. Jerry Brown



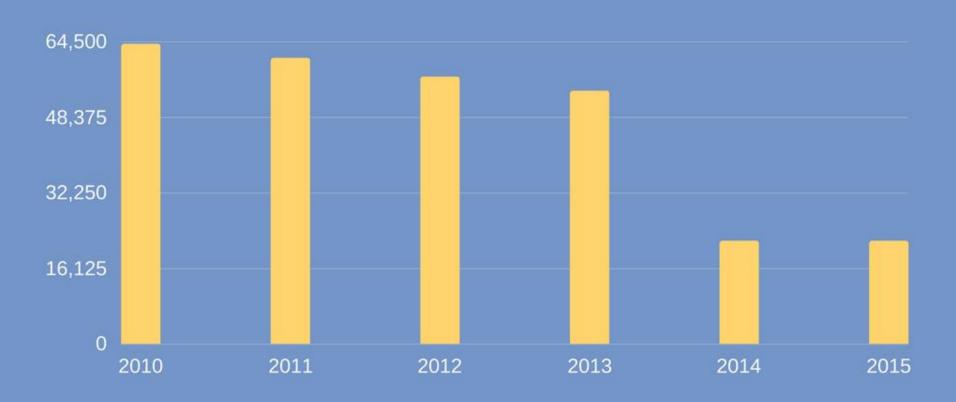


LED ROADWAY LIGHTING

TRIPLE BOTTOM LINE EXAMPLE



STREET LIGHTING CO2 EMISSIONS



Source: Caltrans Fact Book 2015

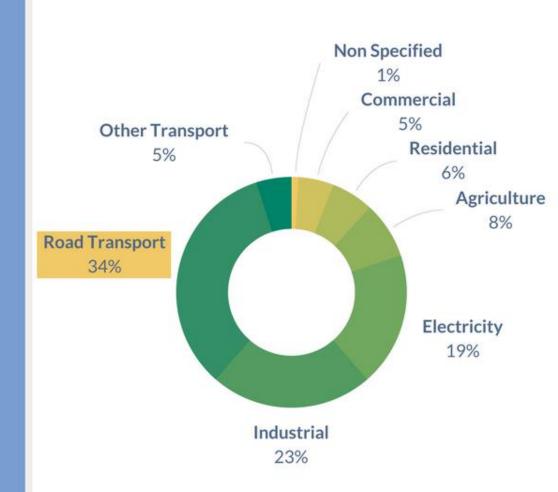
TO CLARIFY:

GHG REDUCTION IS A GOOD PROXY FOR SUSTAINABILITY



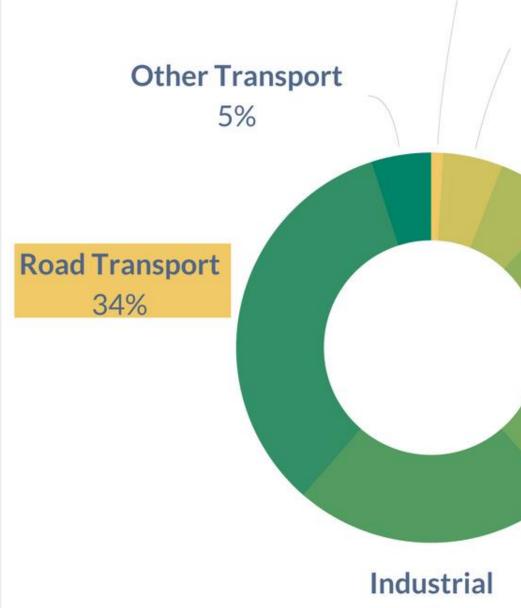
CALIFORNIA'S GHG EMISSIONS

 Transportation sector emissions are included in several "pieces of pie"

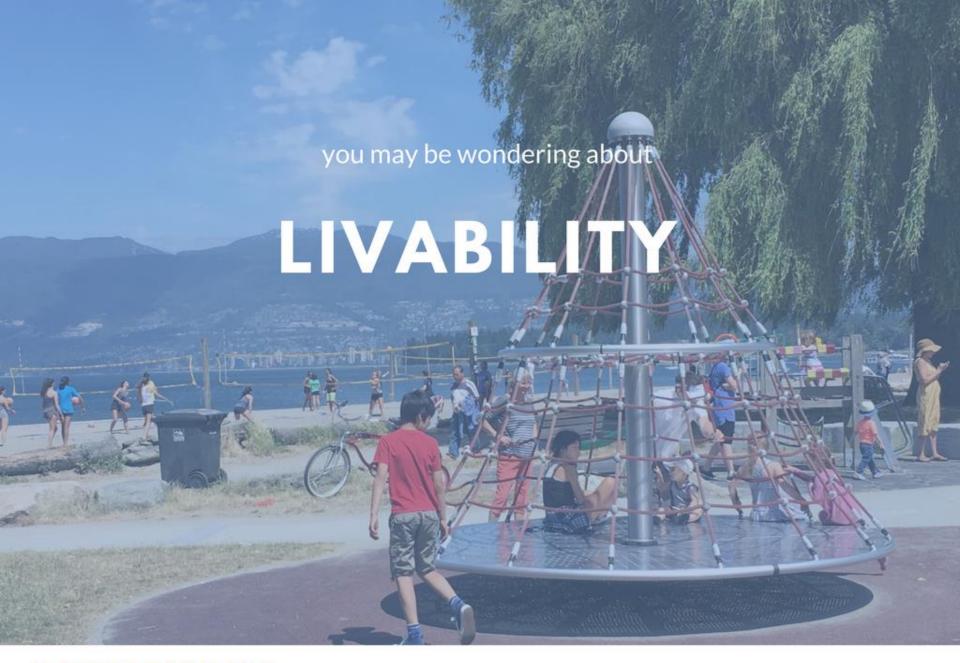


1/3 OF CALIFORNIA'S GHG EMISSIONS DUE TO ROAD USE

- · Reduce on-road emissions
- Use a triple bottom line approach



23%



ACCELERATED BRIDGE PROGRAM

CLEARING PINCH POINTS ALONG CRITICAL FREIGHT CORRIDORS AND GAINING TRIPLE BOTTOM LINE BENEFITS





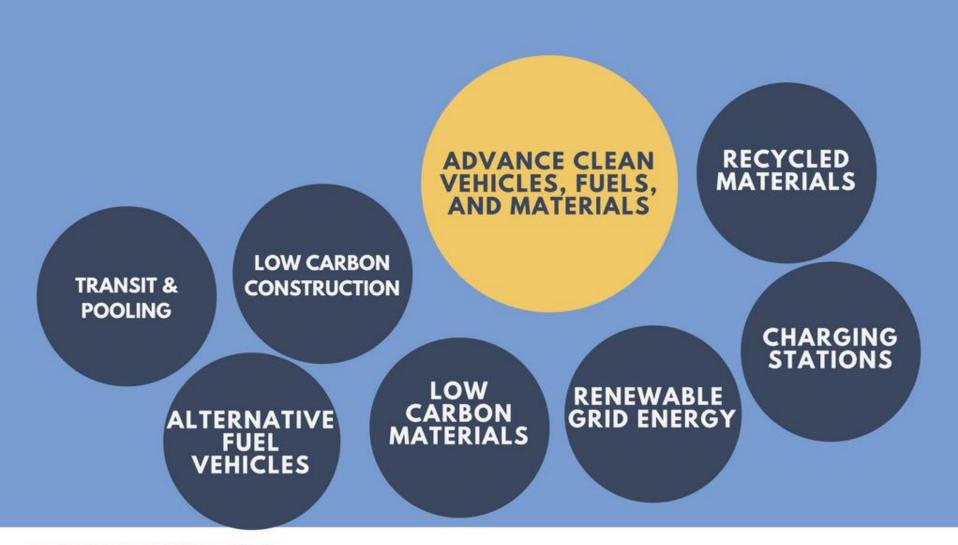
















PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS



SUSTAINABILITY

GETTING THERE FROM HERE



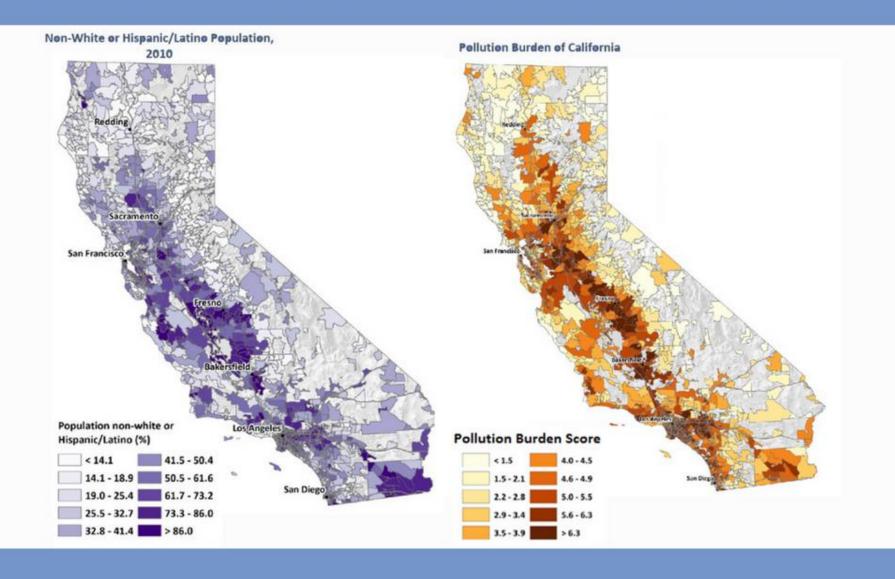
CHAMPION ACTIVE TRANSPORTATION ADVANCE CLEAN VEHICLES, FUELS, AND MATERIALS

PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS





DATA TO VALUES TO DECISIONS





PRIORITIES IN PRACTICE

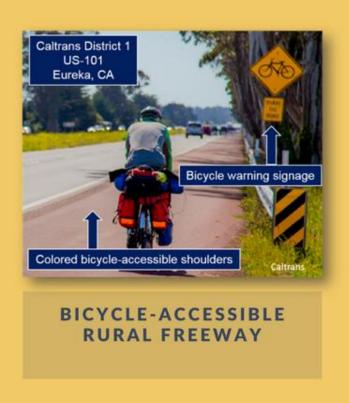


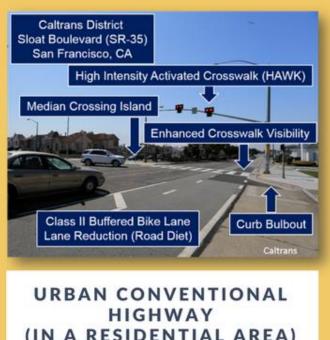
CHAMPION ACTIVE TRANSPORTATION

ADVANCE CLEAN VEHICLES, FUELS, AND MATERIALS

PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS

COMPLETE STREETS PLANNING: CONSIDER CONTEXT





(IN A RESIDENTIAL AREA)

JOSHUA TREE BIKE LANE DISTRICT 8



BEFORE



PLANNED IMPROVEMENTS



AFTER



AFTER



CHAMPION ACTIVE TRANSPORTATION ADVANCE CLEAN VEHICLES, FUELS, AND MATERIALS

PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS

HYDROGEN STREET SWEEPER



WORLD'S FIRST · MADE IN CA · ZERO EMISSIONS



CHAMPION ACTIVE TRANSPORTATION

ADVANCE CLEAN VEHICLES, FUELS, AND MATERIALS

PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS

RESILIENT HIGHWAYS & COAST ELKHORN SLOUGH



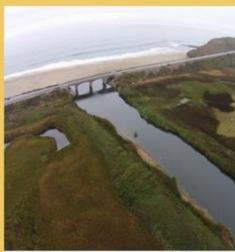
HABITAT



MARINE LIFE



VULNERABILITY



SOLUTIONS

MOVING TOWARDS SUSTAINABILITY



CHAMPION ACTIVE TRANSPORTATION

ADVANCE CLEAN VEHICLES, FUELS, AND MATERIALS

PROTECT PEOPLE, COMMUNITIES, AND NATURAL SYSTEMS





MOVING TOWARDS SUSTAINABILITY

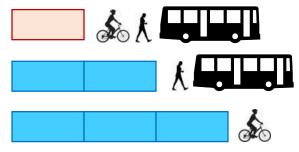
PLANNING HORIZONS · 9.27.17 · ELLEN GREENBERG

Supplemental Slides

ITHIM: Active Transportation Scenario

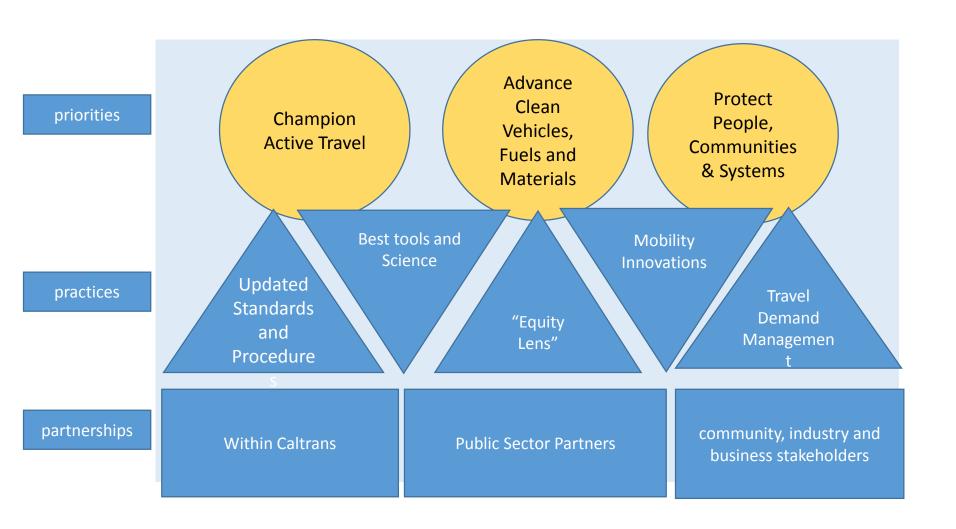
CalTrans Strategic Management Plan, 2015-2020

Double walking and transit and triple bicycling by 2020



Monetary value of health co-benefits ranges from \$1 - 15 billion

	Decrease in disease	Decrease in
	burden	premature deaths
Cardiovascular Dissease	3%	1583
Dementia	3%	488
Diabetes	3%	190
Colon Cancer	1%	48
Road traffic crashes	8%	254



From our partners...









Rail Extension to Monterey County

- Transportation Agency for Monterey County planning passenger rail extension to Salinas, Monterey County
- Improves access to Silicon Valley/ SF Bay Area
- Removes VMT from congested US 101
- CEQA complete
- 112,000 riders/year on 2 round trips (start of service)
- Directly creates 800+ jobs
- Future projects: increased service to Salinas,
 Monterey Branch Line light rail



Complete Streets, Bicycle & Pedestrian Projects

- Transportation Agency for Monterey County funds bike & pedestrian projects
 - Monterey Bay Sanctuary Trail
 - Fort Ord Rec Trail & Greenway (FORTAG)
 - Marina Salinas Multimodal Corridor
- Funding programs give preference to "complete streets" projects
- New Self-Help Measure "X" has funds for FORTAG, Safe Routes to School and Transit
- Bike Month: May
- Wayfinding Plan

2017 Transportation Sector Climate Action Strategy

2017 Transportation Sector Climate Action Strategy: Dual Mandates

Proposition A mandates SFMTA to develop a Strategy every two years that reports on the progress towards achieving greenhouse gas reduction goals.



The Sea Level Rise Action Plan

mandates that each department conduct a vulnerability assessment of their systems and assets.





Worlds First Hydrogen Sweeper Fact Sheet

- Manufacturer Global Environmental Products
- Cost \$930,000 (Partnership CT & CARB)
- > Top Speed 60-65 MPH
- ➤ Duty Cycle 10 HRS
- ➤ Fuel Cell 80 KW
- > Tank Capacity 15 KG @350 BAR
- Battery Voltage 380V Nominal
- > Propulsion Direct Electric Drive
- Control Digital, Torque Vectoring
- ➤ Data Collection Wireless Telematics

- > Environmental Benefits Zero Emissions
- ➤ Petroleum Product Reduction
- ➤ Noise Reduction of 65 70%
- ➤ Reduces Potential Fluid Release
- >6600 Gallons of Diesel Saved
- >7700 Gallons of CNG Saved (gas equivalent)
- >24,000 Grams of NOX Reduction (diesel)
- ➤ 6300 Grams CO Reduction (diesel)
- ≥16,500 Grams of NOX Reduction (CNG)
- >900,000 Grams of CO Reduction (CNG)